

Machine Tool (Metal Cutting Types) Manufacturing: 2002

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2002 Economic Census

Manufacturing

Industry Series



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U.S. Department of Commerce
Economics and Statistics Administration
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-- Not applicable for this report.

Table 1. Historical Statistics for the Industry: 2002 and Earlier Years

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year ¹	Com- panies ²	All estab- lish- ments ³	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)	
			Number ⁴	Payroll (\$1,000)	Number ⁴	Hours (1,000)	Wages (\$1,000)					
333512, Machine tool (metal cutting types) manufacturing	2002..	342	372	18 372	875 447	9 439	17 481	369 725	1 431 882	1 618 691	3 153 990	'61 536
	2001..	N	N	21 636	1 035 209	11 643	23 843	441 646	1 698 877	2 236 113	4 090 063	106 835
	2000..	N	N	24 859	1 152 937	13 939	28 766	539 012	2 175 278	2 510 456	4 694 858	146 852
	1999..	N	N	25 497	1 159 444	14 889	30 177	540 117	2 081 018	2 483 463	4 601 568	186 081
	1998..	N	N	27 539	1 196 365	15 972	32 382	592 461	2 410 231	2 866 757	5 244 020	224 532
	1997..	368	401	29 577	1 274 460	17 051	35 366	629 388	2 666 276	2 813 536	5 331 245	142 228

¹Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

²For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

³Includes establishments with payroll at any time during the year.

⁴Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 2. Industry Statistics for Selected States: 2002

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments ²		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		Total	With 20 employees or more	Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
333512, Machine tool (metal cutting types) manufacturing												
United States	1	372	202	18 372	875 447	9 439	17 481	369 725	1 431 882	1 618 691	3 153 990	'61 536
California	—	30	12	2 469	131 115	1 102	1 392	49 259	188 272	176 125	362 630	'2 889
Connecticut	1	12	5	905	32 959	302	635	11 487	95 855	115 296	218 245	'9 149
Illinois	4	30	15	1 237	58 757	664	1 356	24 668	120 221	103 545	222 075	'6 434
Michigan	1	90	55	3 136	161 815	1 841	3 681	80 187	222 532	281 278	574 749	'9 382
New Hampshire	4	4	3	246	12 468	127	241	4 524	13 191	14 572	30 887	'499
New York	—	16	9	2 019	94 584	1 146	2 169	45 655	130 639	190 562	314 552	'7 304
Ohio	—	35	19	1 778	84 826	772	1 290	30 922	80 262	150 851	259 828	'3 530
Pennsylvania	2	14	8	675	33 637	357	615	12 779	63 714	39 526	115 020	'886
South Carolina	3	6	3	247	11 571	159	353	6 299	18 385	14 564	34 007	'347
Texas	—	5	3	151	5 942	77	169	3 131	11 546	11 347	23 495	'604
Washington	—	5	4	292	17 724	102	207	4 615	70 079	25 533	65 089	1 195
Wisconsin	1	28	16	1 242	57 064	687	1 336	25 672	105 525	92 012	199 126	'4 381

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1—10 to 19 percent; 2—20 to 29 percent; 3—30 to 39 percent; 4—40 to 49 percent; 5—50 to 59 percent; 6—60 to 69 percent; 7—70 to 79 percent; 8—80 to 89 percent; 9—90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 3. Detailed Statistics by Industry: 2002

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
333512, Machine tool (metal cutting types) manufacturing	
Companies ¹	number.. 342
All establishments ²	number.. 372
Establishments with 1 to 19 employees	number.. 170
Establishments with 20 to 99 employees	number.. 171
Establishments with 100 employees or more	number.. 31
All employees ³	number.. 18 372
Total compensation	\$1,000.. 1 042 185
Annual payroll	\$1,000.. 875 447
Total fringe benefits	\$1,000.. 166 738
Production workers, average for year	number.. 9 439
Production workers on March 12	number.. 9 641
Production workers on May 12	number.. 9 536
Production workers on August 12	number.. 9 316
Production workers on November 12	number.. 9 219
Production worker hours	1,000.. 17 481
Production worker wages	\$1,000.. 369 725
Total cost of materials	\$1,000.. 1 618 691
Materials, parts, containers, packaging, etc., used	\$1,000.. 1 156 023
Resales	\$1,000.. 379 218
Purchased fuels	\$1,000.. 4 944
Purchased electricity	\$1,000.. 23 018
Contract work	\$1,000.. 55 488
Quantity of electricity purchased for heat and power	1,000 kWh.. 358 370
Quantity of electricity generated less sold for heat and power	1,000 kWh.. D
Total value of shipments	\$1,000.. 3 153 990
Primary products value of shipments	\$1,000.. 2 370 750
Secondary products value of shipments	\$1,000.. 189 849
Total miscellaneous receipts	\$1,000.. 593 391
Value of resales	\$1,000.. 466 622
Contract receipts	\$1,000.. 28 307
Other miscellaneous receipts	\$1,000.. 98 462
Primary products specialization ratio	percent.. 93
Value of primary products shipments made in all industries	\$1,000.. 2 560 951
Value of primary products shipments made in this industry	\$1,000.. 2 370 750
Value of primary products shipments made in other industries	\$1,000.. 190 201
Coverage ratio	percent.. 93
Value added	\$1,000.. 1 431 882
Total inventories, beginning of year	\$1,000.. 1 005 736
Finished goods inventories	\$1,000.. 311 333
Work-in-process inventories	\$1,000.. 455 434
Materials and supplies inventories	\$1,000.. 238 969
Total inventories, end of year	\$1,000.. 891 351
Finished goods inventories	\$1,000.. 267 295
Work-in-process inventories	\$1,000.. 396 055
Materials and supplies inventories	\$1,000.. 228 001
Gross value of depreciable assets (acquisition costs) at beginning of year	\$1,000.. [†] 1 568 920
Total capital expenditures (new and used)	\$1,000.. [†] 61 536
Buildings and other structures (new and used)	\$1,000.. [†] 9 003
Machinery and equipment (new and used)	\$1,000.. [†] 52 503
Automobiles, trucks, etc., for highway use	\$1,000.. [†] 3 082
Computers and peripheral data processing equipment	\$1,000.. [†] 8 496
All other expenditures for machinery and equipment	\$1,000.. [†] 40 925
Total retirements	\$1,000.. [†] 87 306
Gross value of depreciable assets at end of year	\$1,000.. [†] 1 543 150
Depreciation charges during year	\$1,000.. [†] 92 155
Total rental payments	\$1,000.. 40 995
Buildings and other structures	\$1,000.. 24 546
Machinery and equipment	\$1,000.. 16 449
Total other expenses ⁴	\$1,000.. 248 069
Response coverage ratio ⁵	percent.. 73
Repair and maintenance services of buildings and/or machinery ⁴	\$1,000.. 11 100
Communications services ⁴	\$1,000.. 8 580
Legal services ⁴	\$1,000.. 5 525
Accounting, auditing, and bookkeeping services ⁴	\$1,000.. 3 282
Advertising and promotional services ⁴	\$1,000.. 17 843
Expensed computer hardware and supplies and purchased computer services ⁴	\$1,000.. 6 096
Refuse removal (including hazardous waste) services ⁴	\$1,000.. 1 376
Management consulting and administrative services ⁴	\$1,000.. 4 350
Taxes and license fees ⁴	\$1,000.. 11 486
All other expenses ⁴	\$1,000.. 178 432

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Based on 2002 Annual Survey of Manufactures (ASM) sample data.

⁵A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 4. Industry Statistics by Employment Size: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class	E ¹	All establishments ²	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
333512, Machine tool (metal cutting types) manufacturing											
All establishments	1	372	18 372	875 447	9 439	17 481	369 725	1 431 882	1 618 691	3 153 990	'61 536
Establishments with—											
1 to 4 employees	4	34	104	5 121	58	106	2 398	7 299	8 398	16 558	'349
5 to 9 employees	2	54	363	15 968	215	325	7 122	23 679	42 897	81 934	'893
10 to 19 employees	3	82	1 163	51 011	700	1 233	25 454	81 365	70 958	153 326	'4 532
20 to 49 employees	2	119	3 714	168 568	2 174	4 438	82 513	271 925	219 934	509 708	'13 138
50 to 99 employees	2	52	3 718	182 695	2 047	4 351	82 196	296 126	317 060	619 398	'12 315
100 to 249 employees	1	22	3 261	160 882	1 676	3 419	71 078	317 300	317 351	640 269	'13 485
250 to 499 employees	—	3	979	46 276	424	691	13 883	69 730	83 752	170 912	D
500 to 999 employees	—	5	h	D	D	D	D	D	D	D	D
1,000 to 2,499 employees	—	1	g	D	D	D	D	D	D	D	—
2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—
Administrative records ⁴	9	3	9	385	6	12	251	1 719	1 523	3 242	'39

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1—10 to 19 percent; 2—20 to 29 percent; 3—30 to 39 percent; 4—40 to 49 percent; 5—50 to 59 percent; 6—60 to 69 percent; 7—70 to 79 percent; 8—80 to 89 percent; 9—90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 5. Industry Statistics by Primary Product Class Specialization: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All establishments ¹	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ²	Payroll (\$1,000)	Number ²	Hours (1,000)	Wages (\$1,000)				
333512	Machine tool (metal cutting types) manufacturing	372	18 372	875 447	9 439	17 481	369 725	1 431 882	1 618 691	3 153 990	'61 536
3335121	Metal gear cutting machines	7	1 052	46 876	513	924	20 396	15 756	99 212	116 064	D
3335122	Metal grinding, polishing, buffing, honing, and lapping machines, except gear-tooth grinding, lapping, polishing, and buffing machines ...	51	2 438	116 389	1 261	2 513	48 264	194 899	170 772	383 579	'4 688
3335123	Metal lathes (turning machines) numerically and nonnumerically controlled	15	1 681	80 114	955	1 797	34 481	181 805	238 032	443 698	'4 654
3335124	Metal milling machines (excluding machining centers)	5	323	13 535	209	426	7 205	30 455	14 882	48 068	D
3335125	Machine tools for home workshops, laboratories, garages, etc. (metalworking and primarily metalworking only)	14	416	22 518	178	387	7 428	74 107	39 105	80 976	'1 368
3335126	Parts for metal cutting-type machine tools (sold separately), including rebuilt and remanufactured metal cutting machine tools	72	2 934	135 548	1 485	2 603	54 674	190 238	220 540	425 981	'9 458
3335127	Metal machining centers (multifunction numerically controlled machines)	19	2 467	127 738	1 138	1 530	52 166	206 521	205 736	415 245	'4 206
3335128	Metal station type machines	8	826	48 564	441	934	22 227	58 371	123 551	221 096	'2 102
3335129	Other metal cutting machine tools (except those designed primarily for home workshops, laboratories, garages, etc.)	51	2 922	130 758	1 456	2 923	56 124	262 782	312 573	583 611	'18 156
333512A	Metal boring machines and drilling machines (excluding machining centers)	17	1 112	51 484	538	1 028	17 949	94 624	79 567	177 944	'5 737

¹Includes establishments with payroll at any time during the year.

²Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6a. Products Statistics: 2002 and 1997

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
333512	Machine tool (metal cutting types) manufacturing	2002.. N 1997.. N	X X	X X	2 560 951 4 737 311
3335121	Metal gear cutting machines	2002.. N 1997.. N	X X	X X	80 206 181 261
33351212	Metal gear cutting machines	2002.. N 1997.. N	X X	X X	80 206 N
3335121200	Metal gear cutting machines ¹	2002.. 12 1997.. N	X X	X X	80 206 N
3335122	Metal grinding, polishing, buffing, honing, and lapping machines, except gear-tooth grinding, lapping, polishing, and buffing machines	2002.. N 1997.. N	X X	X X	312 516 596 877
33351221	Metal grinding, polishing, buffing, honing, and lapping machines, except gear-tooth grinding, lapping, polishing, and buffing machines	2002.. N 1997.. N	X X	X X	312 516 596 877
3335122100	Metal grinding, polishing, buffing, honing, and lapping machines, except gear-tooth grinding, lapping, polishing, and buffing machines ¹	2002.. 79 1997.. 105	X X	X X	312 516 596 877
3335123	Metal lathes (turning machines) numerically and nonnumerically controlled	2002.. N 1997.. N	X X	X X	182 053 489 775
33351231	Metal lathes (turning machines) numerically and nonnumerically controlled	2002.. N 1997.. N	X X	X X	182 053 489 775
3335123100	Metal lathes (turning machines) numerically and nonnumerically controlled ¹	2002.. 29 1997.. 51	X X	X X	182 053 489 775
3335124	Metal milling machines (excluding machining centers)	2002.. N 1997.. N	X X	X X	51 269 350 026
33351241	Metal milling machines (excluding machining centers)	2002.. N 1997.. N	X X	X X	51 269 350 026
3335124100	Metal milling machines (excluding machining centers) ¹	2002.. 22 1997.. 44	X X	X X	51 269 350 026
3335125	Machine tools for home workshops, laboratories, garages, etc. (metalworking and primarily metalworking only)	2002.. N 1997.. N	X X	X X	78 323 54 937
33351251	Machine tools for home workshops, laboratories, garages, etc. (metalworking and primarily metalworking only)	2002.. N 1997.. N	X X	X X	72 326 54 937
3335125101	Metal drilling machines for home workshops, laboratories, garages, etc.	2002.. 4 1997.. 6	X X	X X	D 9 531
3335125106	Metal grinding and polishing machines for home workshops, laboratories, garages, etc. (including crankshaft regrounding and valve grinding machines)	2002.. 9 1997.. 5	X X	X X	D D
3335125116	Metal sawing and cut-off machines for home workshops, laboratories, garages, etc.	2002.. 4 1997.. 8	X X	X D	2 891 D
3335125198	Other metalworking (or primarily metalworking) machines for home workshops, laboratories, garages, etc. (including automotive cylinder re boring machines and lathes)	2002.. 11 1997.. N	X X	X X	15 868 N
3335125Y	Machine tools for home workshops, laboratories, garages, etc. (metalworking and primarily metalworking only), nsk	2002.. N 1997.. N	X X	X X	5 997 -
3335125YVV	Machine tools for home workshops, laboratories, garages, etc. (metalworking and primarily metalworking only), nsk	2002.. N 1997.. N	X X	X X	5 997 -
3335126	Parts for metal cutting-type machine tools (sold separately), including rebuilt and remanufactured metal cutting machine tools	2002.. N 1997.. N	X X	X X	566 180 714 118
33351261	Parts for metal cutting type machine tools (sold separately), rebuilt metal cutting machine tools, and remanufactured metal cutting machine tools	2002.. N 1997.. N	X X	X X	505 619 712 803
3335126101	Parts for metal cutting machine tools (sold separately)	2002.. 122 1997.. 128	X X	X X	388 596 550 271
3335126107	Rebuilt metal cutting type machine tools (including machines returned to same configuration they were in when new from factory)	2002.. 33 1997.. N	X X	X X	49 453 N
3335126111	Remanufactured metal cutting-type machine tools (including machines in which the original carcass is reused and all possible modern improvements have been incorporated) ¹	2002.. 24 1997.. N	X X	X X	67 570 N
3335126Y	Parts for metal cutting type machine tools (sold separately), rebuilt metal cutting machine tools, and remanufactured metal cutting machine tools, nsk	2002.. N 1997.. N	X X	X X	60 561 1 315
3335126YVV	Parts for metal cutting type machine tools (sold separately), rebuilt metal cutting machine tools, and remanufactured metal cutting machine tools, nsk	2002.. N 1997.. N	X X	X X	60 561 1 315
3335127	Metal machining centers (multifunction numerically controlled machines)	2002.. N 1997.. N	X X	X X	382 324 932 619
33351271	Metal machining centers (multifunction numerically controlled machines)	2002.. N 1997.. N	X X	X X	382 324 932 619
3335127100	Metal machining centers (multifunction numerically controlled machines) ¹	2002.. 32	X	X	382 324

See footnotes at end of table.

Table 6a. **Products Statistics: 2002 and 1997—Con.**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
333512	Machine tool (metal cutting types) manufacturing—Con.				
3335127	Metal machining centers (multifunction numerically controlled machines)—Con.				
33351271	Metal machining centers (multifunction numerically controlled machines)—Con.				
3335127100	Metal machining centers (multifunction numerically controlled machines) ¹ —Con.				
	1997..	56	X	X	932 619
3335128	Metal station type machines	2002..	N	X	138 461
	1997..	N	X	X	543 289
33351281	Metal station type machines	2002..	N	X	138 461
	1997..	N	X	X	543 289
3335128100	Metal station type machines ¹	2002..	11	X	138 461
	1997..	26	X	X	543 289
3335129	Other metal cutting machine tools (except those designed primarily for home workshops, laboratories, garages, etc.)	2002..	N	X	458 447
	1997..	N	X	X	450 333
33351291	Other metal cutting machine tools (except those designed primarily for home workshops, laboratories, garages, etc.)	2002..	N	X	458 447
	1997..	N	X	X	450 333
3335129100	Other metal cutting machine tools (except those designed primarily for home workshops, laboratories, garages, etc.)	2002..	88	X	458 447
	1997..	119	X	X	450 333
333512A	Metal boring machines and drilling machines (excluding machining centers)	2002..	N	X	114 665
	1997..	N	X	X	238 185
333512A1	Metal boring machines and drilling machines (excluding machining centers)	2002..	N	X	114 665
	1997..	N	X	X	238 185
333512A100	Metal boring machines and drilling machines (excluding machining centers) ¹	2002..	34	X	114 665
	1997..	55	X	X	238 185
333512W	Machine tool (metal cutting types) manufacturing, nsk, total	2002..	N	X	196 507
	1997..	N	X	X	185 891
333512WY	Machine tool (metal cutting types) manufacturing, nsk, total	2002..	N	X	196 507
	1997..	N	X	X	185 891
333512WYWW	Machine tool (metal cutting types) manufacturing, nsk, for nonadministrative-record establishments	2002..	N	X	196 507
	1997..	N	X	X	185 138
333512WYWY	Machine tool (metal cutting types) manufacturing, nsk, for administrative-record establishments	2002..	N	X	—
	1997..	N	X	X	753

¹For additional detail, see Current Industrial Report MQ333W, Metalworking Machinery.

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p—10 to 19 percent estimated; q—20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6b. **Product Class Shipments for Selected States: 2002 and 1997**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3335121	Metal gear cutting machines	
	United States..... 2002..	80 206
	..... 1997..	181 261
	Michigan..... 2002..	10 252
	..... 1997..	N
3335122	Metal grinding, polishing, buffing, honing, and lapping machines, except gear-tooth grinding, lapping, polishing, and buffing machines	
	United States..... 2002..	312 516
	..... 1997..	596 877
	Illinois..... 2002..	5 032
	..... 1997..	31 384
	Michigan..... 2002..	92 054
	..... 1997..	130 869
	New York..... 2002..	5 607
	..... 1997..	N
	Ohio..... 2002..	12 760
	..... 1997..	84 126
	Pennsylvania..... 2002..	59 183
	..... 1997..	N
	Wisconsin..... 2002..	5 037
	..... 1997..	12 652
3335123	Metal lathes (turning machines) numerically and nonnumerically controlled	
	United States..... 2002..	182 053
	..... 1997..	489 775
	Michigan..... 2002..	15 061
	..... 1997..	133 403
3335124	Metal milling machines (excluding machining centers)	
	United States..... 2002..	51 269
	..... 1997..	350 026
	Michigan..... 2002..	3 625
	..... 1997..	13 095
	Ohio..... 2002..	17 513
	..... 1997..	N
3335125	Machine tools for home workshops, laboratories, garages, etc. (metalworking and primarily metalworking only)	
	United States..... 2002..	78 323
	..... 1997..	54 937
	California..... 2002..	4 172
	..... 1997..	N
	Michigan..... 2002..	13 699
	..... 1997..	3 973
	Ohio..... 2002..	7 060
	..... 1997..	13 313
3335126	Parts for metal cutting-type machine tools (sold separately), including rebuilt and remanufactured metal cutting machine tools	
	United States..... 2002..	566 180
	..... 1997..	714 118
	California..... 2002..	64 603
	..... 1997..	N
	Connecticut..... 2002..	6 161
	..... 1997..	21 217
	Illinois..... 2002..	15 140
	..... 1997..	93 343
	Michigan..... 2002..	126 337
	..... 1997..	136 398
	New York..... 2002..	65 132
	..... 1997..	63 616
	Ohio..... 2002..	108 355
	..... 1997..	205 803
	Pennsylvania..... 2002..	18 501
	..... 1997..	21 638
	Wisconsin..... 2002..	40 505
	..... 1997..	56 697
3335127	Metal machining centers (multifunction numerically controlled machines)	
	United States..... 2002..	382 324
	..... 1997..	932 619
	Michigan..... 2002..	29 906
	..... 1997..	35 930
3335128	Metal station type machines	
	United States..... 2002..	138 461
	..... 1997..	543 289
	Michigan..... 2002..	98 376
	..... 1997..	398 376
3335129	Other metal cutting machine tools (except those designed primarily for home workshops, laboratories, garages, etc.)	
	United States..... 2002..	458 447
	..... 1997..	450 333
	California..... 2002..	18 460
	..... 1997..	30 017
	Illinois..... 2002..	35 396
	..... 1997..	43 560
	Michigan..... 2002..	92 277
	..... 1997..	95 050
	Ohio..... 2002..	34 342
	..... 1997..	62 739
	Wisconsin..... 2002..	25 529
	..... 1997..	41 843

See footnotes at end of table.

Table 6b. **Product Class Shipments for Selected States: 2002 and 1997—Con.**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
333512A	Metal boring machines and drilling machines (excluding machining centers)	
	United States..... 2002..	114 665
	..... 1997..	238 185
	Illinois..... 2002..	39 474
 1997..	22 945
	Ohio..... 2002..	3 545
 1997..	11 307
	Wisconsin..... 2002..	23 022
 1997..	27 867

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Table 7. Materials Consumed by Kind: 2002 and 1997

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
333512	Machine tool (metal cutting types) manufacturing		
00900001	Total materials .....2002..	X	1 156 023
	.....1997..	X	2 260 534
33399601	Fluid power pumps, motors, and hydrostatic transmissions (hydraulic and pneumatic) .....2002..	X	13 783
	.....1997..	X	43 237
33399501	Fluid power cylinders and rotary actuators (hydraulic and pneumatic) .....2002..	X	8 142
	.....1997..	X	8 955
33399901	Fluid power filters (hydraulic and pneumatic) .....2002..	X	2 400
	.....1997..	X	3 128
33291203	Fluid power hose and tube fittings and assemblies (hydraulic and pneumatic) .....2002..	X	7 310
	.....1997..	X	8 896
33291207	Fluid power valves (hydraulic and pneumatic) .....2002..	X	5 773
	.....1997..	X	17 613
33272203	Metal bolts, nuts, screws, washers, rivets, and other screw machine products .....2002..	X	13 764
	.....1997..	X	29 172
33200051	Other fabricated metal products (excluding fluid power products and forgings) .....2002..	X	49 988
	.....1997..	X	N
33210000	Forgings .....2002..	X	2 525
	.....1997..	X	N
33151001	Iron and steel castings (rough and semifinished) .....2002..	X	50 180
	.....1997..	X	178 001
33152011	Nonferrous (aluminum, copper, etc.) castings (rough and semifinished) .....2002..	X	2 821
	.....1997..	X	8 700
33120007	Steel bars, bar shapes, and plate (excluding castings, forgings, and fabricated metal products) .....2002..	X	43 510
	.....1997..	X	63 625
33120016	Steel sheet and strip (including tinplate) .....2002..	X	D
	.....1997..	X	N
33120069	Steel structural shapes (excluding castings, forgings, and fabricated metal products) .....2002..	X	D
	.....1997..	X	8 843
33120092	All other steel shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	13 342
	.....1997..	X	N
331000AJ	Nonferrous metal shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	3 614
	.....1997..	X	10 824
33531209	Fractional horsepower electric timing motors, synchronous and subsynchronous (less than 1 hp) .....2002..	X	9 019
	.....1997..	X	26 860
33531217	Other fractional horsepower electric motors (less than 1 hp) .....2002..	X	2 241
	.....1997..	X	20 412
33531221	Integral horsepower electric motors and generators (1 hp or more) .....2002..	X	12 642
	.....1997..	X	25 202
001900B1	Electrical transmission, distribution, and control equipment .....2002..	X	16 659
	.....1997..	X	85 123
33500007	Electrical industrial capacitors, resistors, rheostats, and coil windings .....2002..	X	3 287
	.....1997..	X	23 855
33531409	Numerical controls for metalworking machinery (excluding programmable) .....2002..	X	28 651
	.....1997..	X	74 810
33531411	Programmable controllers for metalworking machinery .....2002..	X	27 688
	.....1997..	X	79 542
001900C4	Printed circuit assemblies, loaded boards, and modules (printed circuit boards with inserted electronic components) .....2002..	X	16 231
	.....1997..	X	N
33441200	Printed circuit boards (without inserted components) for electronic circuitry .....2002..	X	2 253
	.....1997..	X	N
33441300	Semiconductors (including transistors, diodes, rectifiers, and integrated circuits), for electronic circuitry .....2002..	X	358
	.....1997..	X	N
001900D3	All other miscellaneous components and accessories, for electronic circuitry (excluding tubes) .....2002..	X	5 364
	.....1997..	X	N
33451501	Electrical instrument mechanisms and meter movements (including instrument relays) .....2002..	X	6 808
	.....1997..	X	N
33422001	Electronic communication equipment .....2002..	X	174
	.....1997..	X	N
33331401	Optical instruments and lenses (excluding sighting, tracking, and fire control) .....2002..	X	148
	.....1997..	X	N
33299105	Ball bearings (mounted or unmounted) .....2002..	X	13 686
	.....1997..	X	30 260
33299103	Roller bearings (mounted or unmounted) .....2002..	X	6 150
	.....1997..	X	8 298
33361200	Mechanical speed changers, gears, and industrial high-speed drives .....2002..	X	10 187
	.....1997..	X	33 236
32192001	Wood boxes, pallets, skids, and containers .....2002..	X	4 443
	.....1997..	X	6 440
33351503	Cutting tools for machine tools .....2002..	X	17 347
	.....1997..	X	89 178
32610007	Fabricated plastics products (excluding gaskets, hoses, and belting) .....2002..	X	2 851
	.....1997..	X	N
32220017	Paper and paperboard containers (including shipping sacks and other paper packaging supplies) .....2002..	X	1 522
	.....1997..	X	N
00970099	All other materials and components, parts, containers, and supplies .....2002..	X	332 929
	.....1997..	X	871 490
00971000	Materials, ingredients, containers, and supplies, nsk .....2002..	X	382 038
	.....1997..	X	504 834

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

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